

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF OKLAHOMA**

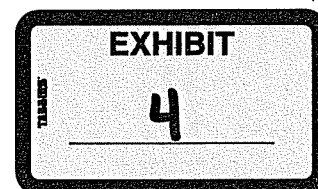
<b>STATE OF OKLAHOMA,</b>	)	
	)	
<b>Plaintiff,</b>	)	
	)	
<b>v.</b>	)	<b>Case No. 05-cv-329-GKF(SAJ)</b>
	)	
<b>TYSON FOODS, INC., et al.,</b>	)	
	)	
<b>Defendants.</b>	)	

**DECLARATION OF ROGER L. OLSEN, Ph.D.**

I, Roger L. Olsen, Ph.D., state the following:

1. I have been retained by the Oklahoma Attorney General to provide evaluation, advice and opinions concerning sampling collection, laboratory analyses, and source of contamination in the Illinois River Watershed.

2. On May 14, 2008, I submitted my Expert Report consisting of 184 pages of text (including table of contents), 73 tables (120 pages), 150 figures and six appendices (219 pages). Three accidentally omitted figures that were referenced in the Report, but were not attached to the Report were produced on June 2, 2008. My eleven page Errata was submitted on July 25, 2008, and I submitted a Second Errata on September 24, 2008. My deposition was taken on September 10 – 11, 2008. As discussed below, the July 25, 2008 and September 24, 2008 Errata consisted of corrections of typographical errors, corrections of errors in calculations, and correcting inadvertent omissions.



3. As discussed in more detail below, with respect to my July 25, 2008 Errata, in addition to the correction of typographical errors, a missing figure referenced in my Report, but inadvertently not attached to the Report on May 15, 2008, was submitted. Also the title and figure number was added to another figure that was already included in my Expert Report. Six sentences were added to correct omissions that resulted in an incomplete explanation of my waste comparison methods and two replacement tables were submitted that corrected calculation errors (these errors also resulted in correction of one table in the text). Finally, I submitted with the July 25, 2008 errata two rewritten paragraphs (rewritten to reflect corrected calculations).

4. Typographical errors documented in my July 25, 2008 errata included correction of wrong references to figures and sections of the Report and correction of misspellings. In addition, corrections to the text were submitted so that the text correctly summarized the data presented in Report tables. These tables and the text summarizing them compare various waste characteristics and masses. The Report tables with the correct waste characteristics did not change.

5. One inadvertently omitted figure (Figure 2.4-1b) was submitted with my July 25, 2008 Errata. This figure was listed in the Report's Table of Contents and discussed in the Report's text. It was simply accidentally left out of my Expert Report. The information on this Figure is provided in other figures and tables of the Report. This Figure does not provide any additional information.

6. One Figure with a missing title and figure number was also submitted in the July 25, 2008 errata. This Figure (Figure 2.4-2) was titled, numbered and resubmitted in the Errata for clarity (the contents of the Figure did not change).

7. Two sentences were added by my July 25, 2008 Errata because the description of a sampling location and a sampling procedure were accidentally omitted. Four introductory sentences were added by these Errata to provide the inadvertently omitted factors used in comparing the waste characteristics. This was provided to clarify the method used for the comparisons. The method and the analysis did not change.

8. Two rewritten paragraphs were submitted in my July 25, 2008 Errata to show the corrections to the comparisons of the waste characteristics. Individual corrections could have been made to specific words in these paragraphs in my Report. However for readability purposes, two new paragraphs were submitted. These two paragraphs are not "new sections". These two paragraphs are replacements of existing paragraphs. No new information was introduced. Only corrections were made.

10. Two tables – Table 6.4-7a and Table 6.4-7b – were corrected in my July 25, 2008 Errata. Calculation errors were found in the spreadsheet used to produce these tables. The errors consisted of incorrect usage of the percent solids of the poultry waste and use of tons as metric tons (kg) instead of avoirdupois pounds. This resulted in small changes to the text table on page 6-12. They do result in a change in my leachate calculations of cattle vs. poultry contribution of phosphorus in the Watershed (a change in Defendants' favor as it increases the cattle share from

7.4-13 percent to 10.7-18.3 percent and reduces the poultry share from 87-92.6 percent to 81.7 - 89.3 percent . However, these corrected calculations still show that poultry waste contributions overwhelm cattle waste contributions of phosphorous in the Watershed. None of the corrections in my July 25, 2008 Errata changed my opinions or conclusions.

11. During by Deposition on September 10-11, 2008, I provided corrections to page 6-60 of my Expert Report (Exhibit 7 to my deposition). These changes corrected minor sample counting errors (and percentages based on those sample counts) and corrected the placement of WWTP discharges and reference samples in wrong sample categories. The "Note" on the table on page 6-60 was corrected to state that reference samples are "excluded" rather than "included" in the "streams" category. These changes on page 6-60 resulted in some minor changes in the number of samples referenced on Figures 6.11-22a and 6.11-22b of my Report. A spreadsheet error was also found for the median and upper quartile for "USGS Stations – Highflow" on these two figures. During my deposition I also provided and discussed Exhibit 11 to my deposition which lists Principal Component Analysis ("PCA") sample scores on Appendix F of my Report (SW 3 Principal Component Scores). During my deposition there was some confusion as to whether the hard copy of Appendix F to my Report included all of the PCA scores. (These PCA sample scores were contained in Appendix F of the electronic copy of my .pdf Report and in electronic spreadsheets provided to Defendants as part of my relied upon materials.) I have attached the correct version of that portion of Appendix F which was also provided as Exhibit 11 in my deposition. (SW3 Principal Component Scores)

12. Even though most of these corrections were provided and discussed at my deposition (only the changes to Figures 6.11-22a and 6.11-22b were not discussed), for clarity I again provided these corrections to Defendants in the form of a Second Errata on September 24, 2008.

13. These Errata items discussed above did not change my opinions, did not provide any new type of analysis or opinions, did not use new methods, did not provide any new sections to my Report and did not provide any new data. My errata were not intended to “bolster” my opinion. These errata were made to correct inadvertent errors and omissions. My analysis, conclusions and opinions are the same.

14. The errors that are corrected by my Errata were made and not discovered prior to delivery of my Expert Report in May 2008 because of our rush to meet the Court’s deadline.

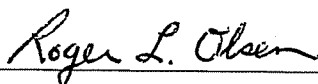
15. In Section six of my Report I referenced and quoted or summarized portions of expert opinions from other experts providing opinions in this case (i.e., Drs. Fisher, Harwood, Teaf, and Engel and Mr. Brown). These references and quotes or summaries clearly identified the name of the expert quoted or summarized in the text of my Report. My Report and the Reports of the experts I referenced were provided to the Defendants in advance of my deposition and the depositions of these experts. The use and reliance on these opinions of other experts as stated in my Report is typical practice for scientific experts in my field.

16. In some instances, I was assisted in drafting portions of my Report by CDM staff or CDM consultants that were selected by me. These people were working directly for me at my direction and under my supervision and control. They were implementing my directions. They were documenting my methods, analysis and evaluations. This method of using junior staff to assist in writing reports is a normal method of operation for me and for other scientific experts in my field. All sections of my Report were reviewed by me, discussed with the assistants, edited and corrected by me and finalized by me.

17. As stated in my Expert Report, Section 6.9, River Phosphorus Concentrations vs. Poultry House Density, is a "summary of investigations conducted under the direction of Dr. Engel." The investigations were conducted by Dr. Tim Cox. Dr. Cox was an employee of CDM (now a consultant). I participated in discussions with Drs. Cox and Engel and helped develop the approach and information used in the evaluations. Drs. Engel and Cox role in development of the information was clearly set out in my Report.

I declare under penalty of perjury, under the laws of the United States of America, that the foregoing is true and correct.

Executed on the 24<sup>th</sup> day of September, 2008.

A handwritten signature in cursive script that reads "Roger L. Olsen". The signature is written in dark ink and is positioned above a horizontal line.

Roger L. Olsen, Ph.D.